UNITED STATES AIR FORCE
INSTALLATION RESTORATION PROGRAM
KELLY AIR FORCE BASE
SAN ANTONIO, TEXAS

Kelly AFB/Bexar County, Texas
Shallow Aquifer Assessment Phase III
Technical Report (Final)

Prepared By Science Applications International Corporation (SAIC)
Kelly Air Force Base, Texas
(Contract No.) F4 1650-95-D-2004-5028
DECEMBER 1998

EXECUTIVE SUMMARY

Science Applications International Corporation was contracted by Kelly AFB to study and determine the use and quality of the shallow aquifer in two areas surrounding Kelly AFB.

One area is bounded from west to east by General McMullen to Cupples Road and from north to south by U.S. Highway 90 to the Kelly AFB boundary. The other area is bounded from west to east by the Kelly AFB boundary to IH-35 and from north to south by W. Malone to S.W. Military Drive to Somerset Road to IH-35.

A two-part study was conducted from April through June 1998. Part one consisted of an electric and water utility survey to discover if an address had its own water well. If the address had electric utility service but no water utility service, it was assumed to have its own water well. Billing account information was obtained from City Public Service (electric utility), San Antonio Water System and Bexar Metropolitan Water District (water purveyors) and subsequently entered into a database. It was determined that 2,557 addresses had electric service but did not have water service. This information was delivered to the San Antonio Metropolitan Health District for further investigation.

Part two was conducted to identify all shallow water wells within the study area. This was accomplished by a mailout to 3,000 to 5,000 addresses during the Shallow Aquifer Assessment, Phase II. Nineteen shallow water wells were identified but only fifteen sampled during the Phase III assessment. The results are summarized below:

- Three wells were determined to be dry. One well was filled with debris and could not be sampled.

- Of the remaining 15 wells, total petroleum hydrocarbons (TPH), semivolatile organic compounds, arsenic, cadmium, chromium, cyanide, hexavalent chromium, mercury, nickel, selenium and silver were all non-detect (ND).

- Seven wells were ND for trichloroethene (TCE). Eight wells had TCE concentrations ranging from 0.94 micrograms per liter (µgIL) to 60 µg/L. Three wells (1310 Division, 416 Fay, Residence 9) exceeded maximum contaminant level (MCL) concentrations for TCE *(5.0* µg/L).

- Seven wells were ND for tetrachloroethene (PCE). Eight wells had concentrations of PCE ranging from 0.34 µgl to 41 µgl. Three wells (1310 Division, 416 Fay, Residence 5) exceeded MCL concentrations for PCE *(5.0 µgl).*

- Eight wells were ND for concentrations of cis-l,2-dichloroethene (DCE). Seven wells had concentrations of DCE ranging from 0.7 µg/L to 190 µg/L. One well (416 Fay) exceeded the MCL concentration for DCE (70 µg/L).

- Vinyl chloride was not detected at any of the sampled wells.

- One well (Residence 2) exceeded the MCL for thallium (2.0 µg/L) at 10.7 µg/L.